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Approved For Release 2000/09/01 : CIA-RDP81B00878R000200050106-3

WEEKLY FIELD REPORT

DETACHMENT B

28 November 1956

NO CHANGES
DECLASSIFIED
CLASS. CHANGED TO: TS S
NEXT REVIEW DATE: 12/11/81
AUTH: HR 70-2
DATE: 12/11/81
REVIEWER: 037189

TO:

FROM:

SUBJECT: Status of Systems One and Three Equipment Beginning
3 September and ending 3 December.

SYSTEM ONE

25X1A

1. We have been complying with yours and [REDACTED]
instructions on the maintenance and repair of the System.

2. Have been running the same four recorders for the System
since arrival at this location. Main troubles have been as follows:

A. The capstan motor speed varies with each recorder.
RPM described in manual does not give correct tape speed for all
recorders. Each motor must be adjusted individually for correct
tape travel. Speeds vary from 5400 to 5900 RPM. The brushes and
commutator are being cleaned and/or replaced every 15 hours. The
speeds are checked by measuring the 1KC OSC. on the ampex playback
unit and electronic counter.

B. The feed motors have been operating very satisfactorily
up until now. We have replaced one after 40 hours of operation. We
have been replacing take-up motors due to excessive noise and erratic
operation. Examination of the trouble revealed an excessive wear of
the gear which is driven by the worm gear. Both of these gears are
located in the motor housing. Suggest making the above gear a
separate Pak item so that motors can be repaired in the field.

C. The winds on reels have been good to very good. The
reels are still warping slightly in flight but have no apparent
effect on winds.

D. "B" boards have required very little attention except
for a few tube and transistor failures. Low playback amplifier
gains have been increased by replacing input tubes (V709, V710 and
V711).

E. Overall gains of info amplifiers have been dropping
steadily due to the decrease of gain in video strip. Replacing

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R tubes and components in the video strip brought the gain up slightly (90). We have been increasing R115 (damping resistor in T101 secondary). This brings video gain up to approximately 110 which gives an overall gain of 7.5 and better. All delay line characteristics have been satisfactory to date. On several, R158 had to be increased to eliminate jitter in output pulse. Have been increasing 159 to increase pulse widths to 150 - 160 micro secs. Have replaced all two microfarad capacitors with the new type.

F. Note: Recently, overall amplifier gain on ramp checks have been greater than gains obtained on the bench -- using a pulse generator or test set.

Typical Cases: Bench check gain of 7.5 will give a ramp check gain of 12 - 14. We are looking into this matter at the present.

G. Vibrator supplies have required little or no attention to date.

SYSTEM THREE

We have run two flights with the system. The results seem to be very erratic. Interchanged individual boards and receiver positions on the bench with no success. Cannot do much due to the lack of spare boards.

Parts mostly used from Pak (average monthly).

1. Take-up motors (2).
2. Capstan motors (2).
3. Feed motors (1).
4. Reels (1).
5. Tape (0.5 mil) (25).
6. Mechanical filter spring on capstan motor (2).
7. Tube, type 6112 (2).
8. Tube, type 6152 (2).
9. Transistor, type 951 (2).
- Transistor, type 903 (1).

SUGGESTIONS:

1. Incorporate the jam roller solenoid in Pak list.
2. 6112 type tubes have been coming through with high filament resistances -- making tubes unusable. Suggest looking into this matter.
3. We need hardware for recorders very badly. Two recorders have been grounded due to cannibalization of hardware, particularly snap-rings of all sizes.
4. Suggest shipping assorted hardware for recorders as soon as possible. Also the proper tools used with snap rings.

We would appreciate any suggestions and information regarding service and maintenance of the system.

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